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PATENT  
Attorney Docket No.: 20174C-004960US

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

On

7/26/04

TOWNSEND and TOWNSEND and CREW LLP

By:

Tiffany Wu

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

CARL L. HANSEN et al.

Application No.: 10/810,350

Filed: March 26, 2004

For: MICROFLUIDIC PROTEIN  
CRYSTALLOGRAPHY TECHNIQUES

Examiner: Not Yet Assigned

Art Unit: 1732

INFORMATION DISCLOSURE  
STATEMENT UNDER 37 CFR §1.97 and  
§1.98

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

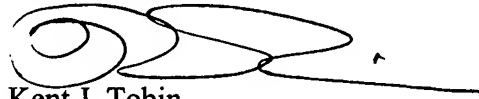
The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. In accordance with 37 CFR §1.98(d), copies of the references can be found in Application No. 09/887,997, filed June 22, 2001 (Attorney Docket No. 20174C-004900US). It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement.

However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,

A handwritten signature in black ink, consisting of a large, stylized 'K' followed by a series of loops and a long horizontal stroke extending to the right.

Kent J. Tobin  
Reg. No. 39,496

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60238277 v1



<b>Substitute for form 1449A/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		<b>Complete if Known</b>	
		Application Number	10/810,350
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		First Named Inventor	Hansen, Carl L.
		Art Unit	1732
		Examiner Name	Unassigned
Sheet 1	of 8	Attorney Docket Number	20174C-004960US

U.S. PATENT DOCUMENTS+					
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		Number Kind Code <sup>2</sup> (if known)			
	1	US-2001/0027745 A1	10-11-2001	Weigl et al.	
	2	US-3,570,515	03-16-1971	Kinner	
	3	US-3,747,628	07-24-1973	Holster et al.	
	4	US-4,046,159	09-06-1977	Pegourie	
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		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	54	EP	592 094	A2	04-13-1994			
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	66	WO	99/52633	A	10-21-1999	Luminal Technologies		
	67	WO	00/43748	A	07-27-2000	YSI Inc.		
	68	WO	99/00655	A	01-07-1999	Immunetics		

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		Application Number	10/810,350		
		Filing Date	March 26, 2004		
		First Named Inventor	Hansen, Carl L.		
		Art Unit	1732		
		Examiner Name	Unassigned		
Sheet	7	of	8	Attorney Docket Number	20174C-004960US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	132	SCHUELLER et al., "Fabrication of glassy carbon microstructures by soft lithography," <u>Sensors and Actuators</u> , 72(2):125-139 (1999).	
	133	SHOJI et al., "Smallest Dead Volume Microvalves for Integrated Chemical Analyzing Systems," <u>Proceedings of Transducers '91</u> , 1991 International Conference on Solid-State Sensors and Actuators, pages 1052-1055 (1991).	
	134	SHOJI, S., "Fluids for Sensor Systems", <u>Topics in Current Chemistry</u> , 194:162-188 Springer Verlag Berlin Heidelberg (1998).	
	135	SMITS, J.G., "Piezoelectric Micropump with Three Valves Working Peristaltically", <u>Sensors and Actuators</u> , A21-A23:203-206 (1990).	
	136	SOHN et al., "Capacitance cytometry: Measuring biological cells one by one," <u>PNAS</u> , 97(20):10687-10690 (2000).	
	137	THOMAS et al., Distribution coefficients of Protein Impurities in Ferritin and Lysozyme Crystals Self-Purification in Microgravity, <u>Journal of Crystal Growth</u> 211 (2000), pp. 149-156.	
	138	TUFFE et al., "Silicon Diffused-Element Piezoresistive Diaphragms," <u>J. Appl. Phys.</u> , 33(11):3322-3327 (1962).	
	139	UNGERET al., "Monolithic Microfabricated Valves and Pumps by Multilayer Soft Lithography," <u>Science</u> , 288:113-116 (2000).	
	140	VAN DE POL et al., "A Thermo-Pneumatic Actuation Principle for A Microminature Pump and Other Micromechanical Devices," <u>Sensors and Actuators</u> , 17:139-143 (1989)	
	141	VAN DE POL et al., "Micro Liquid Handling Devices - A Review", <u>Micro Systems Technologies</u> , 90:799-805 (1990).	
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	143	WASHIZU et al., "Molecular Dielectrophoresis of Biopolymers," <u>IEEE Transactions on Industry Applications</u> , 30(4):835-843 (1994).	
	144	WU et al., MEMS Flow Sensors for Nano-Fluidic Applications, <u>Sensors and Actuators A</u> 89, 2001, pp 152-158.	
	145	XIA et al., "Complex Optical Surfaces Formed by Replica Molding Against Elastomeric Masters," <u>Science</u> , 273:347-349 (1996).	
	146	XIA et al., "Micromolding in Capillaries: Applications in Material Science," <u>J. American Chemical Society</u> , 118:5722-5731 (1996).	
	147	XIA et al., "Micromolding of Polymers in Capillaries: Applications in Microfabrication," <u>Chemistry of Materials</u> , 8(7):1558-1567 (1996).	

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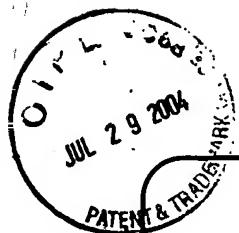
Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		<b>Complete if Known</b>			
		Application Number	10/810,350		
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		First Named Inventor	Hansen, Carl L.		
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Sheet	8	of	8	Attorney Docket Number	20174C-004960US

NON PATENT LITERATURE DOCUMENTS			
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	148	XIA et al., "Soft Lithography," <u>Angew. Chem. Int. Ed.</u> 37:551-575 (1998).	
	149	XP-002149046, Ullmann's Encyclopedia of Industrial Chemistry, Sixth Edition, 1999 Electronic Release, 6 pages.	
	150	YANG et al., "A MEMS Thermopneumatic silicone Membrane Valve," <u>Proceedings of the IEEE 10th Annual Workshop of Micro Electro Mechanical Systems Workshop (MEMS '97)</u> , held 1/26-30/97 in Nagoya, Japan, pages 114-118 (1997).	
	151	YANG et al., "A Mems Thermopneumatic Silicone Membrane Valve", <u>Proceedings of IEEE 10<sup>th</sup> Annual International Workshop on MicroElectro Mechanical Systems, Sensors and Actuators</u> , A64(1):101-108 (1998).	
	152	YAZDI et al., "Micromachined Inertial Sensors," <u>Proceedings of IEEE</u> , 86(8):1640-1659 (1998).	
	153	YOUNG et al., "Contoured elastic-membrane microvalves for microfluidic network integration," <u>J. Biomechanical Engineering</u> , 121:2-6 (1999).	
	154	ZENGERLE et al., "A Micro Membrane Pump with Electrostatic Actuation," <u>1992 IEEE Conf. on Micro Electro Mechanical Systems</u> , held 2/4-7/92 in Travemunde Germany, pgs. 19-24.	
	155	ZENGERLE et al., "Performance Simulation of Microminiaturized Membrane Pumps," from 7th International Conference on Solid-State Sensors and Actuators held 6/7-10/93 in Yokohama Japan, pages 106-109.	

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PTO/SB/21 (04-04)

**TRANSMITTAL  
FORM**

(to be used for all correspondence after initial filing)

<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	10/810,350	
	Filing Date	March 26, 2004	
	First Named Inventor	Hansen, Carl L.	
	Art Unit	1732	
	Examiner Name	Not Yet Assigned	
Total Number of Pages in This Submission	12	Attorney Docket Number	20174C-004960US

**ENCLOSURES (Check all that apply)**

<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement (2 pgs) w/attached PTO/SB/08A (2 pgs) and PTO/SB/08B (6 pgs) citing refs 1- 155. <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application  <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund  <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Technology Center (TC) <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Return Postcard
<b>Remarks</b> The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.		

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm or Individual name	Townsend and Townsend and Crew LLP Kent J. Tobin	Reg. No. 39,496
Signature		
Date	8/26/04	

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.			
Typed or printed name	TIFFANY WU		
Signature		Date	7/26/04